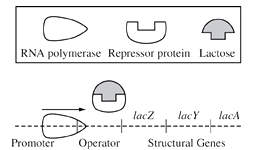
Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_

**Notes Questions for the Unit 12, Part 1 Notes: Gene Regulation**

Ms. Ottolini, AP Biology

1. Identify the purpose of gene regulation in unicellular prokaryotic organisms vs. multicellular eukaryotic organisms.
2. Identify the differences between a repressible and inducible operon. Use the terms corepressor and inducer in your answer.
3. Is the operon pictured below a repressible or inducible operon, and how do you know? Is it turned on or off?



1. Compare / contrast the role of DNA methylation and histone acetylation in gene regulation.
2. Discuss the role of RNA interference (RNAi) in gene regulation. Does this turn genes on or off, and which level of gene regulation does this process affect (DNA structure, transcription, post-transcription, translation, post-translation)?